UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/765,223	01/18/2001	Gordon Bremer	061607-1430	7375

7590 10/20/2005

Gordon Bremer
Paradyne Corporation
8545 126th Avenue, North
Largo, FL 33773

EXAMINER	
YANCHUS III, PAUL B	

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/765,223	BREMER ET AL.	
	Examiner	Art Unit	
	Paul B. Yanchus	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 July 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *8-10 and 44-71* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *66-71* is/are allowed.

6)☒ Claim(s) *8-10,44,45,49-53 and 57-64* is/are rejected.

7)☒ Claim(s) *46-48, 54-56 and 65* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This final office action is in response to amendments filed on 7/14/05.

Claim Objections

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

It appears that new claims 44-71 should be renumbered to 45-72.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 44, 45, 49-53 and 57-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amrany et al., US Patent no. 6,711,207 [Amrany] and Advanced Configuration and Power Interface Specification, Revision 2.0 [ACPI], in view of Lee et al., US Patent no. 5,414,863 [Lee].

Regarding claim 44, Amrany discloses a system for controlling power in a transmitter unit in a communication device for use on a telephony subscriber loop, comprising:

a detector [DSP] configured to detect the presence of an incoming packetized digital signal for transmission on the subscriber loop [DSL, column 9, lines 24-25]; and

a transmitter power manager [DSP] coupled to said detector, said transmitter power manager configured to provide power, in response to the detection, to a first and second elements [line driver and DAC and ADC, column 8, lines 51-63] residing in said transmitter unit [DSP restores data transmit power, column 9, lines 34-40].

Amrany teaches that the power consumed by the elements is reduced prior to the generating of the control signal, but does not explicitly teach that the elements are powered off prior to the generating of the control signal. ACPI teaches a plurality of individually controllable power states for devices in a system [D0, D1, D2, D3, page 21]. In state D0 a device is completely active and power consumption is the highest. In states D1 and D2 certain functions in a device are disabled and power consumption is reduced. In state D3 power is fully removed from a device [page 21]. It would have been obvious to one of ordinary skill in the art to modify the Amrany system to transition the elements to a D3 power state instead of a reduced power (D1 or D2) state when a digital communications signal is not detected. One would be motivated to transition a device to a D3 power state instead of a reduced power (D1 or D2) state during idle periods to eliminate power consumed by the element and consequently minimize power consumption in the system [ACPI, page, 11, Table 2-2].

Amrany and ACPI, as described above, disclose providing power to first and second elements when the presence of an incoming packetized digital signal is detected. Amrany and

ACPI do not explicitly disclose providing power to a first element and then providing power, after a delay, to the second element. Lee discloses staggering the turn-on times of different components in a system by turning on a first component and then after a delay turning on a second component [column 1, lines 59-65 and column 3, lines 25-55]. It would have been obvious to one of ordinary skill in the art to modify the Amrany and ACPI system to incorporate the teachings of Lee. One would be motivated to power to a first element and then provide power, after a delay, to the second element in order to prevent power surges and to extend the life of a battery of the system [column 1, lines 59-65].

Regarding claim 45, Amrany further discloses that the detector is configured to generate a control signal in response to the detection of said communication signal [DSP determines if either transmit or receive bins are being used and controls power accordingly, column 9, lines 30-40] and that the transmitter provides power to the first and second elements in response to the control signal [DSP restores data transmit power, column 9, lines 34-40].

Regarding claim 49, Amrany further discloses that detector is further configured to detect the absence of said packetized digital signal and to remove power, in response to the absence, to at least one of the first and the second element [column 8, lines 51-67].

Regarding claims 50 and 51, Amrany, ACPI and Lee teach a system, as described above, which controls power in a communication system, but does not specifically explain the process of adjusting the power supplied to various elements in the communication device. However, as indicated by Amrany the process of physically adjusting power to various elements in a device to achieve a lower power state for the device is notoriously well known to those of ordinary skill in the art. Furthermore, the use of transistors as switching circuits also an elementary concept in

the field of electronics. It would have been obvious to one of ordinary skill in the art to use well-known transistors as switching devices in order to implement the well-known processes of adjusting power to various elements in a device to achieve a lower power state for the device.

Regarding claim 52, Amrany discloses a communication system for use on a telephony subscriber loop, comprising:

a detector [DSP] configured to detect the presence of an incoming packetized digital signal for transmission on the subscriber loop [DSL, column 9, lines 24-25];

a transmitter configured to amplify and transmit said packetized digital signal onto said subscriber loop [transmit channel, column 8, lines 53-65]; and

a transmitter power manager [DSP] coupled to said detector, said transmitter power manager configured to provide power, in response to the detection, to first and second elements [line driver and DAC and ADC, column 8, lines 51-63] residing in said transmitter [DSP restores data transmit power, column 9, lines 34-40].

Amrany teaches that the power consumed by the elements is reduced prior to the generating of the control signal, but does not explicitly teach that the elements are powered off prior to the generating of the control signal. ACPI teaches a plurality of individually controllable power states for devices in a system [D0, D1, D2, D3, page 21]. In state D0 a device is completely active and power consumption is the highest. In states D1 and D2 certain functions in a device are disabled and power consumption is reduced. In state D3 power is fully removed from a device [page 21]. It would have been obvious to one of ordinary skill in the art to modify the Amrany system to transition the elements to a D3 power state instead of a reduced power (D1 or D2) state when a digital communications signal is not detected. One would be motivated to

transition a device to a D3 power state instead of a reduced power (D1 or D2) state during idle periods to eliminate power consumed by the element and consequently minimize power consumption in the system [ACPI, page, 11, Table 2-2].

Amrany and ACPI, as described above, disclose providing power to first and second elements when the presence of an incoming packetized digital signal is detected. Amrany and ACPI do not explicitly disclose providing power to a first element and then providing power, after a delay, to the second element. Lee discloses staggering the turn-on times of different components in a system by turning on a first component and then after a delay turning on a second component [column 1, lines 59-65 and column 3, lines 25-55]. It would have been obvious to one of ordinary skill in the art to modify the Amrany and ACPI system to incorporate the teachings of Lee. One would be motivated to power to a first element and then provide power, after a delay, to the second element in order to prevent power surges and to extend the life of a battery of the system [column 1, lines 59-65].

Regarding claim 53, Amrany further discloses that the detector is configured to generate a control signal in response to the detection of said communication signal [DSP determines if either transmit or receive bins are being used and controls power accordingly, column 9, lines 30-40] and that the transmitter provides power to the first and second elements in response to the control signal [DSP restores data transmit power, column 9, lines 34-40].

Regarding claim 57, Amrany further discloses that detector is further configured to detect the absence of said packetized digital signal and to remove power, in response to the absence, to at least one of the first and the second element [column 8, lines 51-67].

Regarding claims 58 and 59, Amrany, ACPI and Lee teach a system, as described above, which controls power in a communication system, but does not specifically explain the process of adjusting the power supplied to various elements in the communication device. However, as indicated by Amrany the process of physically adjusting power to various elements in a device to achieve a lower power state for the device is notoriously well known to those of ordinary skill in the art. Furthermore, the use of transistors as switching circuits also an elementary concept in the field of electronics. It would have been obvious to one of ordinary skill in the art to use well-known transistors as switching devices in order to implement the well-known processes of adjusting power to various elements in a device to achieve a lower power state for the device.

Regarding claim 60, Amrany discloses a method for controlling power in a transmitter unit in a communication device, comprising the steps of:

detecting [DSP] the presence of a packetized digital signal transmitted onto a telephony subscriber loop by said transmitter unit [DSL, column 9, lines 24-25]; and

providing power, in response to the detection, to a first and second elements [line driver and DAC and ADC, column 8, lines 51-63] residing in said transmitter unit [DSP restores data transmit power, column 9, lines 34-40].

Amrany teaches that the power consumed by the elements is reduced prior to the generating of the control signal, but does not explicitly teach that the elements are powered off prior to the generating of the control signal. ACPI teaches a plurality of individually controllable power states for devices in a system [D0, D1, D2, D3, page 21]. In state D0 a device is completely active and power consumption is the highest. In states D1 and D2 certain functions in a device are disabled and power consumption is reduced. In state D3 power is fully removed

from a device [page 21]. It would have been obvious to one of ordinary skill in the art to modify the Amrany system to transition the elements to a D3 power state instead of a reduced power (D1 or D2) state when a digital communications signal is not detected. One would be motivated to transition a device to a D3 power state instead of a reduced power (D1 or D2) state during idle periods to eliminate power consumed by the element and consequently minimize power consumption in the system [ACPI, page, 11, Table 2-2].

Amrany and ACPI, as described above, disclose providing power to first and second elements when the presence of an incoming packetized digital signal is detected. Amrany and ACPI do not explicitly disclose providing power to a first element and then providing power, after a delay, to the second element. Lee discloses staggering the turn-on times of different components in a system by turning on a first component and then after a delay turning on a second component [column 1, lines 59-65 and column 3, lines 25-55]. It would have been obvious to one of ordinary skill in the art to modify the Amrany and ACPI system to incorporate the teachings of Lee. One would be motivated to power to a first element and then provide power, after a delay, to the second element in order to prevent power surges and to extend the life of a battery of the system [column 1, lines 59-65].

Regarding claim 61, Amrany further discloses that the generating a control signal in response to the detection of said communication signal [DSP determines if either transmit or receive bins are being used and controls power accordingly, column 9, lines 30-40] and providing power to the first and second elements in response to the control signal [DSP restores data transmit power, column 9, lines 34-40].

Regarding claim 62, Amrany further discloses detecting the absence of said packetized digital signal and removing power, in response to the absence, to at least one of the first and the second elements [column 8, lines 51-67].

Regarding claims 63 and 64, Lee further discloses that the delay is based on the stabilization time of the first and second elements [column 1, line 65 – column 2, line 2].

Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amrany et al., US Patent no. 6,711,207 [Amrany], Advanced Configuration and Power Interface Specification, Revision 2.0 [ACPI] and Lee et al., US Patent no. 5,414,863 [Lee], in view of, Helms et al., US Patent no. 6,144,695 [Helms].

Regarding claim 8, Amrany, ACPI and Lee teach a system, as described above, which controls power in a communication device in a communication system located at a central office, but do not specifically disclose that the system can comprise multiple communication devices. However, as disclosed by Helms, it is well known in the art that a central office will typically possess a multitude of communications devices [DSL modems], which operate to serve a multitude of customers. It would have been obvious to one of ordinary skill in the art to apply the teachings of Amrany, ACPI and Lee to a plurality of communications devices in a communications system in order to reduce the substantial amount of power that is consumed by the plurality of communications devices.

Regarding claims 9 and 10, Amrany, ACPI and Lee teach a system, as described above, which controls power in a communication system, but does not specifically explain the process of adjusting the power supplied to various elements in the communication device. However, as

indicated by Amrany the process of physically adjusting power to various elements in a device to achieve a lower power state for the device is notoriously well known to those of ordinary skill in the art. Furthermore, the use of transistors as switching circuits also an elementary concept in the field of electronics. It would have been obvious to one of ordinary skill in the art to use well-known transistors as switching devices in order to implement the well-known processes of adjusting power to various elements in a device to achieve a lower power state for the device.

Allowable Subject Matter

Claims 46-48, 54-56 and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 66-71 are allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul B. Yanchus whose telephone number is (571) 272-3678. The examiner can normally be reached on Mon-Thurs 8:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H. Browne can be reached on (571) 272-3670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Paul Yanchus
October 17, 2005

LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100